Fig. 1

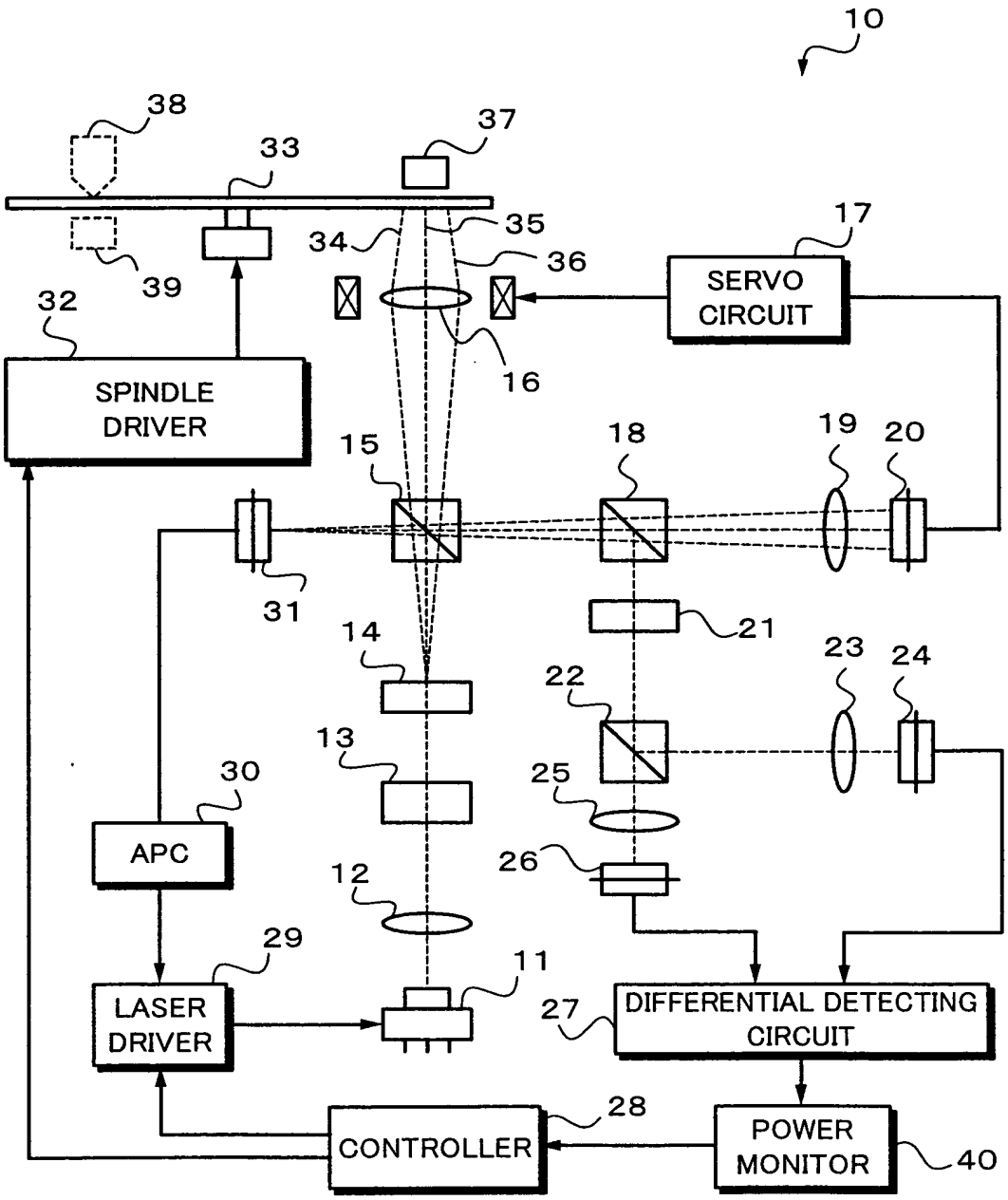
10
38
37
33
35
34
36
17
39
32
SERVO CIRCUIT
16
SPINDLE DRIVER
15
18
19
20
31
21
14
23
24
22
13
25
30
APC
26
12
29
11
LASER DRIVER
27
DIFFERENTIAL DETECTING CIRCUIT
28
CONTROLLER
POWER MONITOR
40

Fig. 2

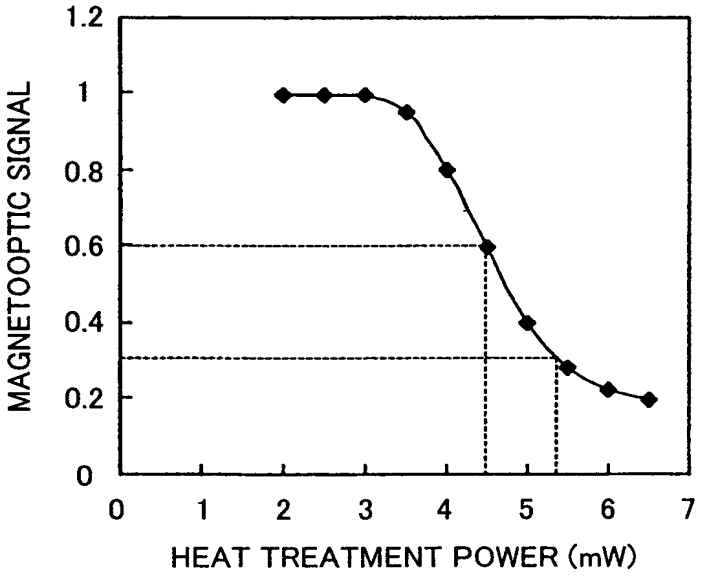
MAGNETOOPTIC SIGNAL
1.2
1
0.8
0.6
0.4
0.2
0
0
1
2
3
4
5
6
7
HEAT TREATMENT POWER (mW)

Fig. 3

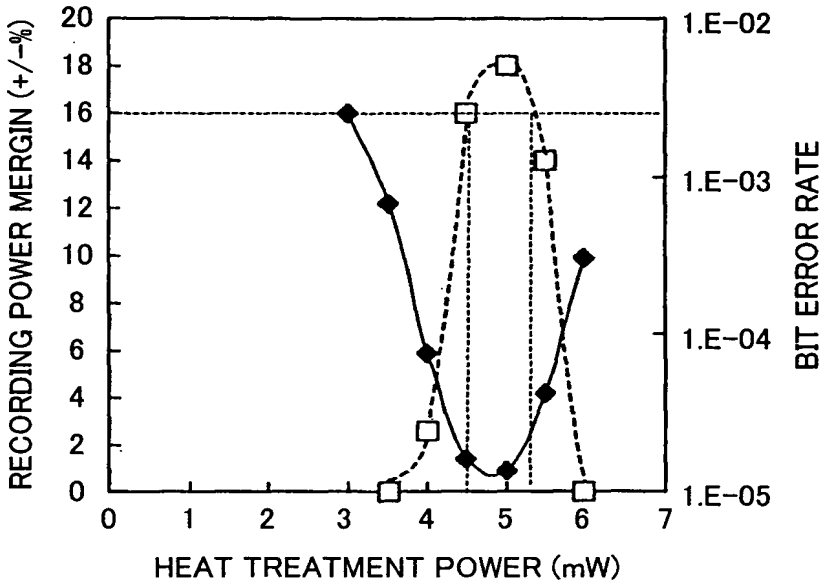
RECORDING POWER MERGIN (+/-%)
20
18
16
14
12
10
8
6
4
2
0
0
1
2
3
4
5
6
7
1.E-02
1.E-03
1.E-04
1.E-05
BIT ERROR RATE
HEAT TREATMENT POWER (mW)

Fig. 4

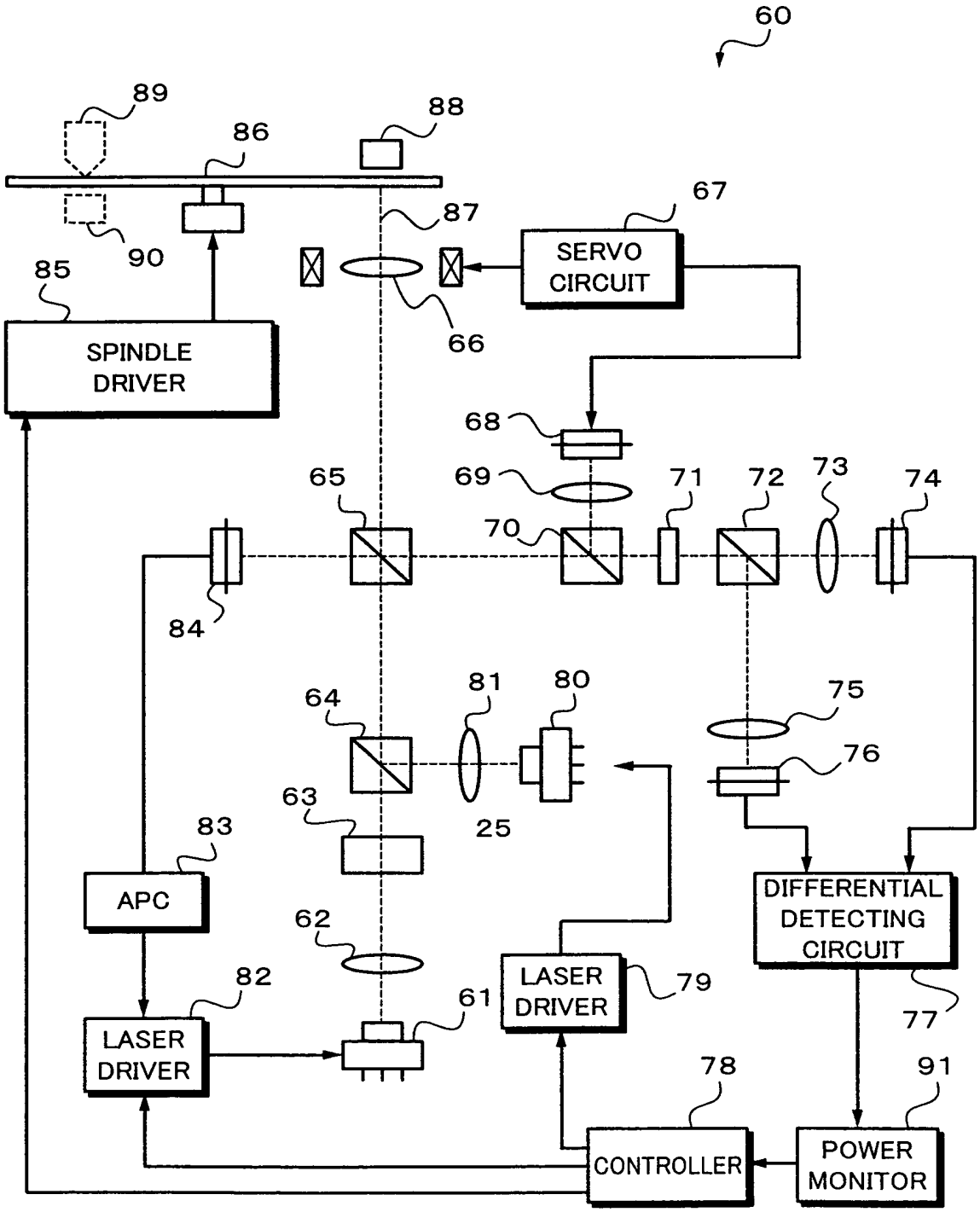
60
89
86
88
87
67
90
85
SERVO CIRCUIT
66
SPINDLE DRIVER
68
65
69
71
72
73
74
70
84
64
81
80
75
76
63
25
83
APC
62
DIFFERENTIAL DETECTING CIRCUIT
82
LASER DRIVER
61
LASER DRIVER
79
77
78
91
CONTROLLER
POWER MONITOR

Fig. 5

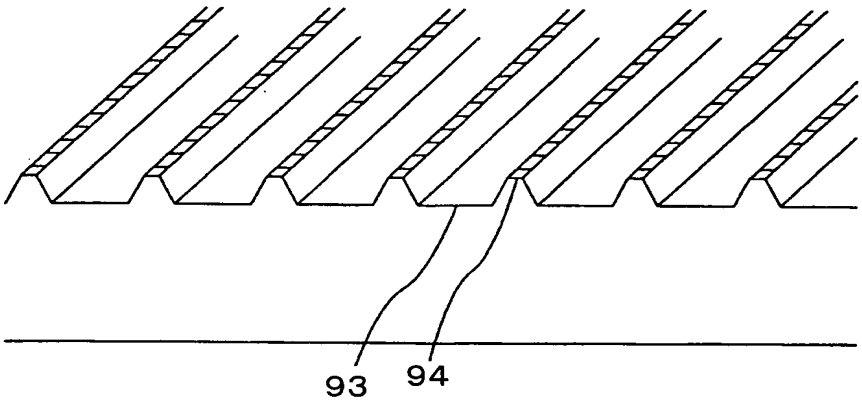

Fig. 6

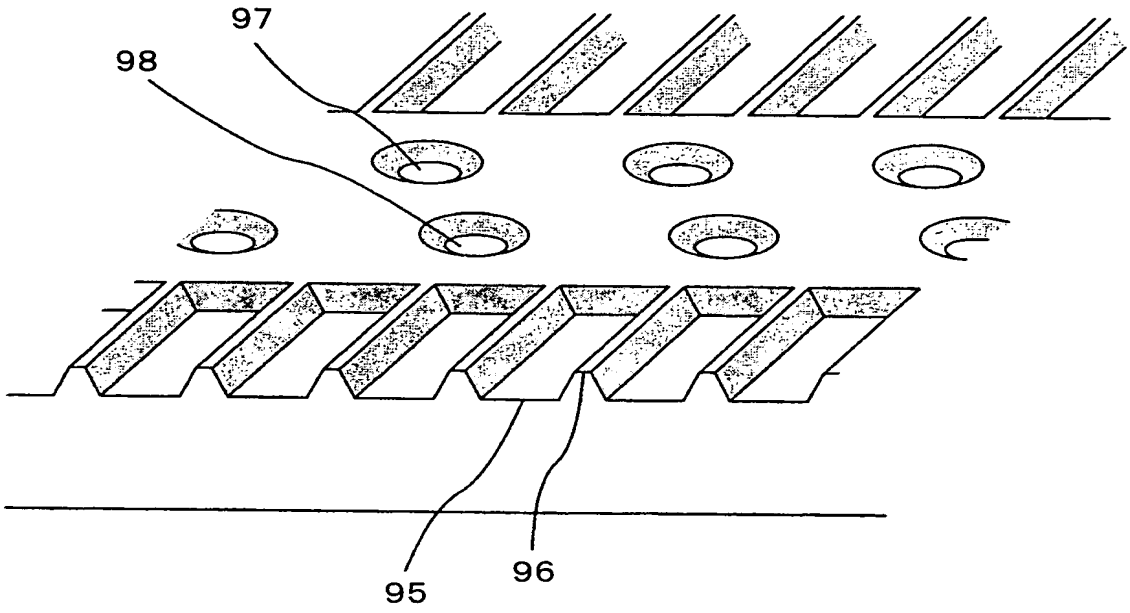

Fig. 7

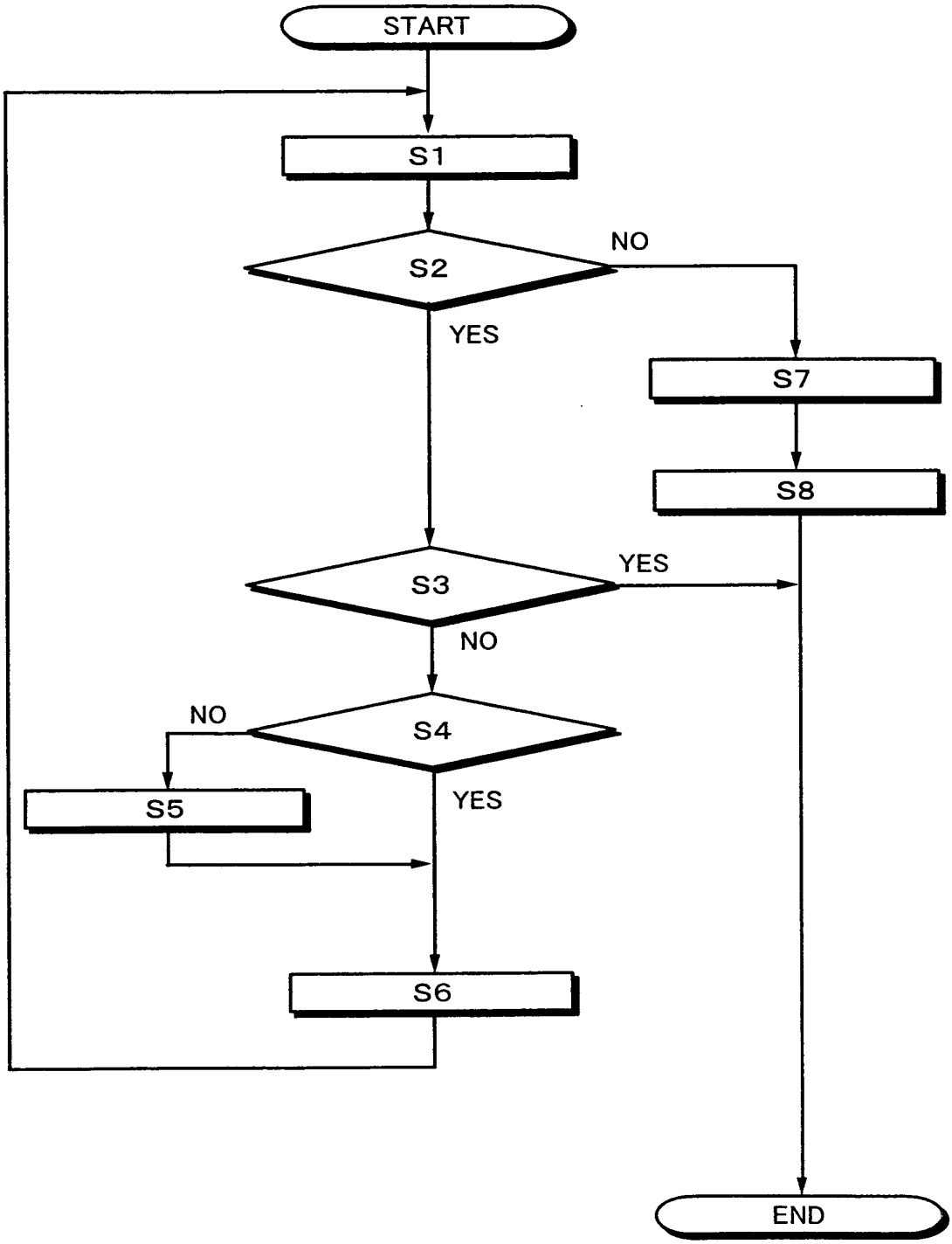

Fig. 8A

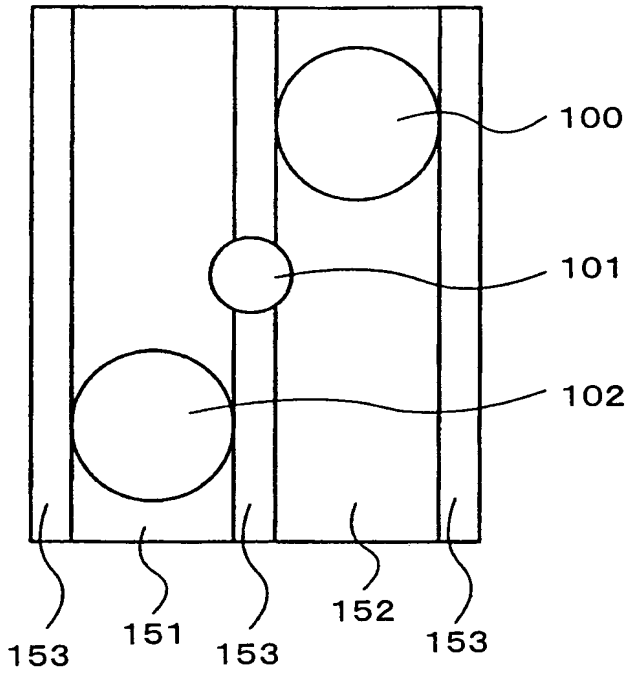

Fig. 8B

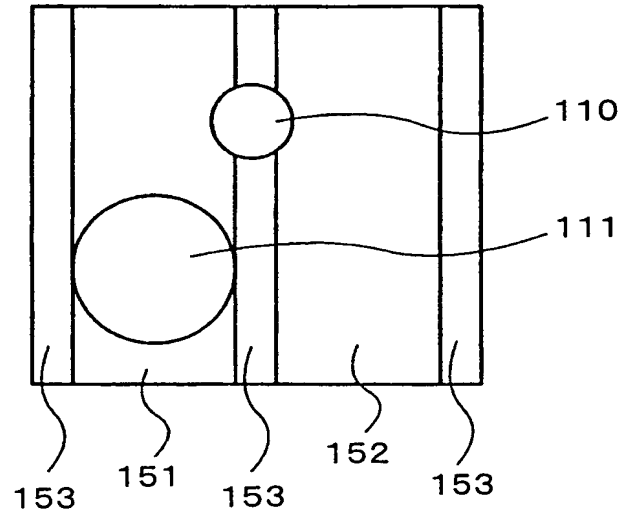

Fig. 9A

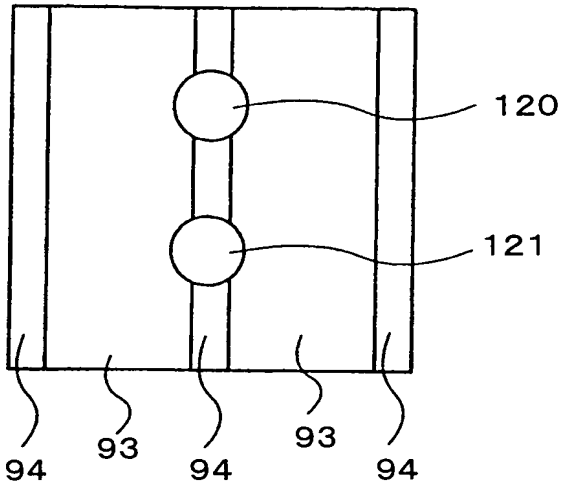
120
121
94
93
94
93
94

Fig. 9B

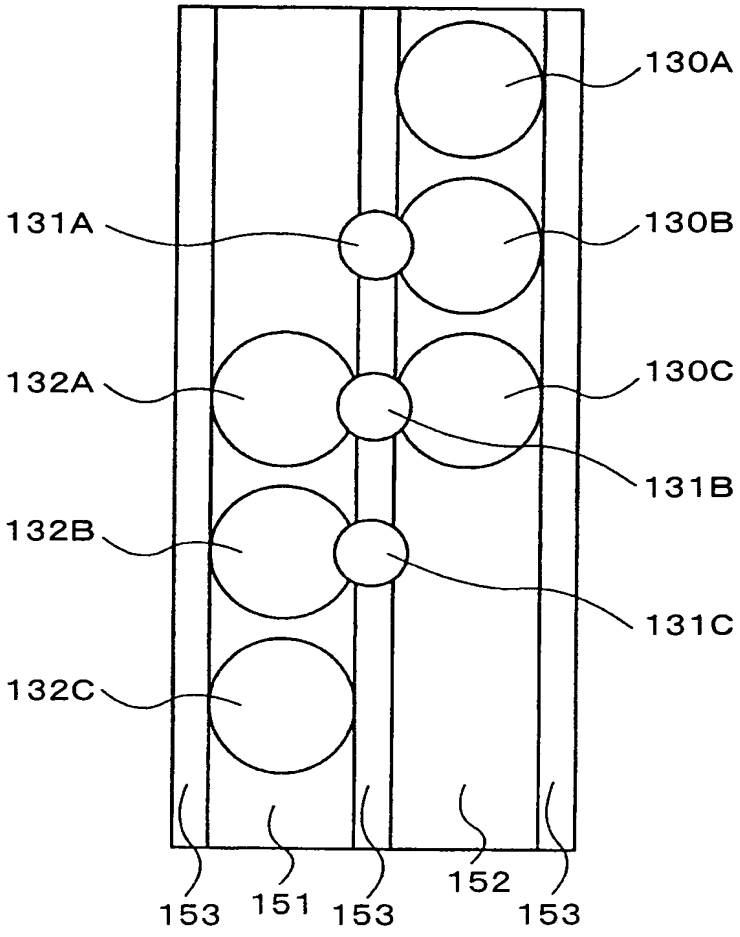
130A
131A
130B
132A
130C
131B
132B
131C
132C
153
151
153
152
153

Fig. 10

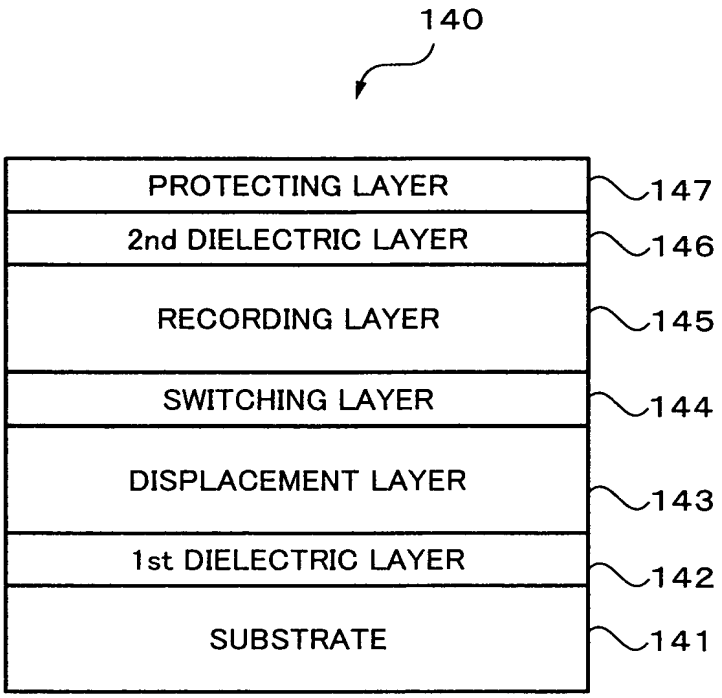
140
PROTECTING LAYER
147
2nd DIELECTRIC LAYER
146
RECORDING LAYER
145
SWITCHING LAYER
144
DISPLACEMENT LAYER
143
1st DIELECTRIC LAYER
142
SUBSTRATE
141

Fig. 11

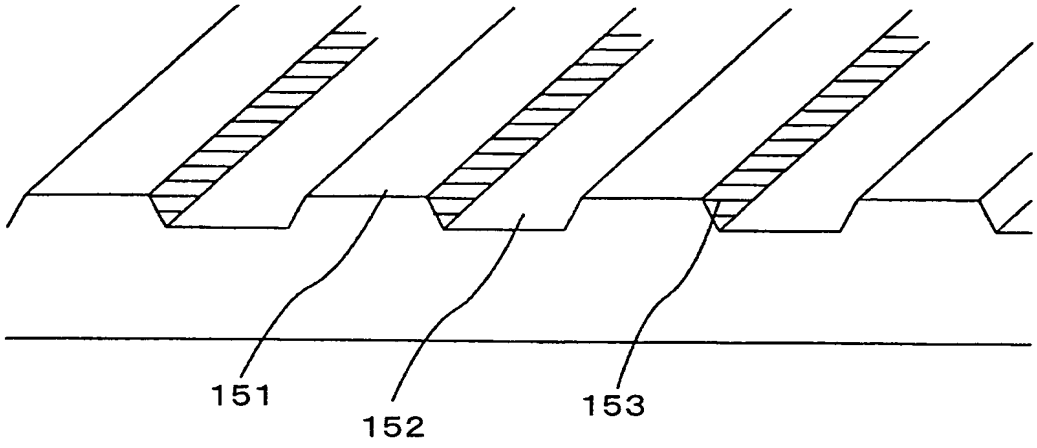

Fig. 12A

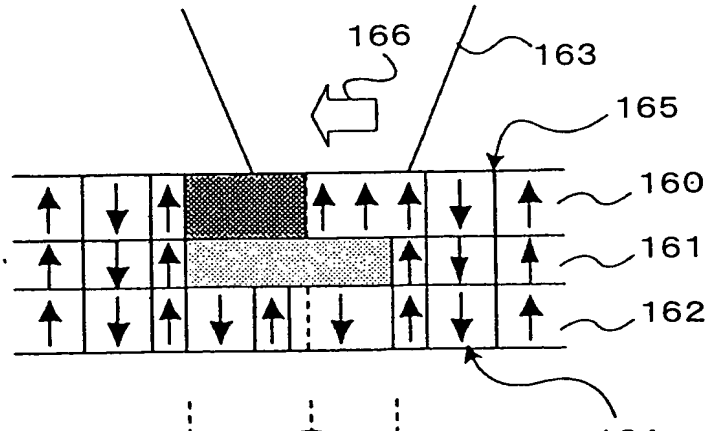

Fig. 12B

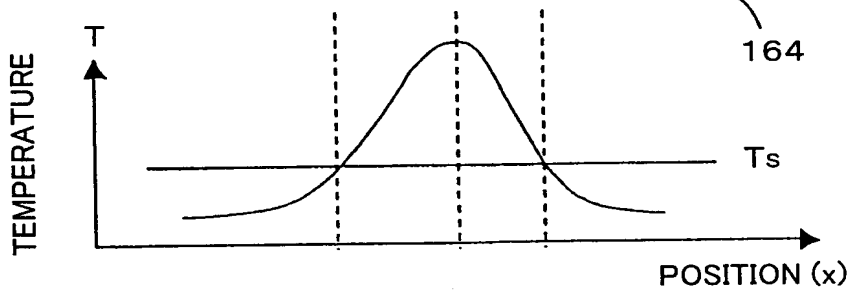

Fig. 12C

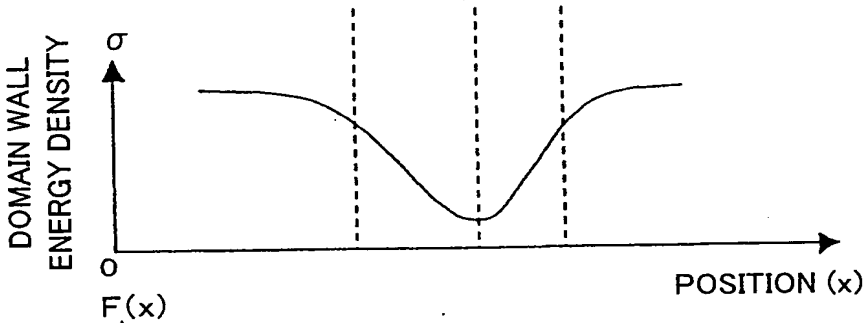

Fig. 12D

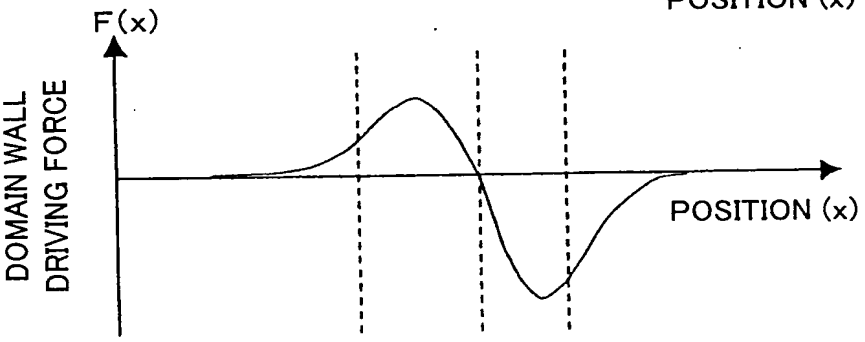

Fig. 12E

DESCRIPTION OF REFERENCE NUMERALS

10 HEAT TREATMENT DETERMINING APPARATUS

11 LD

12 COLLIMATOR

13 SHAPING PRISM

14 DIFFRACTION GRATING

15 BEAM SPLITTER

16 OBJECTIVE LENS

17 SERVO CIRCUIT

18 BEAM SPLITTER

20 PHOTODETECTOR

21 $\lambda/2$ PLATE

22 BEAM SPLITTER

24 PHOTODETECTOR

26 PHOTODETECTOR

27 DIFFERENTIAL DETECTING CIRCUIT

28 CONTROLLER

29 LASER DRIVER

60 HEAT TREATMENT DETERMINING APPARATUS

61 LD

62 COLLIMATOR

63 SHAPING PRISM

65 BEAM SPLITTER

66 OBJECTIVE LENS

67 SERVO CIRCUIT

68 PHOTODETECTOR

70 BEAM SPLITTER

72 BEAM SPLITTER

74 PHOTODETECTOR

76 PHOTODETECTOR

77 DIFFERENTIAL DETECTING CIRCUIT

78 CONTROLLER

79 LASER DRIVER

80 LD

82 LASER DRIVER

S1 DETECT LEVEL OF MAGNETOOPTIC SIGNAL OF HEAT TREATMENT PORTION

S2 WITHIN PERMISSIBLE RANGE?

S3 DETERMINATION FINISHED?

S4 PREDETERMINED RANGE?

S5 CHANGE HEAT TREATMENT POWER

S6 MOVE TO NEXT DETECTING AREA

S7 NOTIFY OF ALARM

S8 STOP PRECEDENT HEAT TREATMENT